

REMARKS

The Telephone Interview

The Examiner is thanked for the telephone interview on August 5, 2004. The undersigned explained the amendment to be made importing limitations of claim 6 into claim 1, and indicated she would file a Notice of Appeal with this response since the Office Action of May 6, 2004 had been made final. No agreement was reached as to patentability.

The Amendment

Limitations of claim 6 have been imported into claim 1.

Claims 1-29, 46 and 47 are pending in this application.

The Novelty Rejection Over Graefe (USP 5002475)

Claims 1-3, 5 and 9-11 have been rejected under 35 U.S.C. 102(b) as anticipated by Graefe. The Office Action states:

Graefe discloses reaction injection molding apparatus, which is used to mold a shaped article from a polymerizable flowable resin-forming composition (abstrat). One such composition has a thermosetting resin such as a polyurethane elastomer of viscosity from 50 to 10,000 centipoises (column 1, lines 49-59; column 4, lines 41-44; column 10, lines 24 and 25).

Disclosure of Graefe, summarized above proves that above claims lack novelty.

* * *

Applicant's arguments filed October 22, 2003 have been fully considered but they are not persuasive. On page 9 of the response the applicants state that "Graefe does not appear to disclose molded forms or mannequins." This statement is not persuasive because Graefe in column 1, lines 8-11 suggests to make molded articles. It is known in the art that colorants have to be uniformly mixed in the matrix.

Applicants do not acquiesce that the foregoing rejection is correct; however, it is submitted that the amendment incorporating limitations of claim 6 into claim 1, upon which the remaining claims except for claim 29 are dependent, overcomes the novelty rejection. Nowhere does Graefe teach a gelling profile which is substantially flat for the first half of the gelling period.

The Obviousness Rejection over Graefe (USP 5002475) in view of Kennedy et al. (USP 6290614) and Hirai et al. (USP 4367307)

Claims 1-29 have been rejected over Graefe in view of Kennedy et al. and Hirai et al. The Office Action states:

Disclosure of Graefe is summarized earlier.

Graefe does not mention specifically organic pigment or dye (of instant claim 8) and colors (of instant claims 25-28).

Kennedy uses white pigment with polyurethane (column 2, lines 42-51).

Hirai uses brown pigment with polyurethane elastomer (column 13, lines 45-45).

Therefore it would have been obvious to use in the composition of Graefe, (a) white pigment (of Kennedy) or (b) brown pigment (of Hirai) or any one or more of other pigments to impart specific color to the molded form or article.

It is noted that prior art is silent about certain limitations of some of above claims.

Since Graefe teaches mixing of colorants and other ingredients, it is reasonable to infer that the mixing is done uniformly throughout the mass. It is also obvious to use a pigment or dye of a certain hardness to optimize the appearance and texture of surface of the molded article. It is also obvious (a) to adjust abrasion resistance of molded article so that an protruding material or flash can be removed by grinding with a sand paper (instant claim 12), (b) to adjust the composition to achieve certain impact strength (instant claim 13) and (c) to adjust certain physical properties (of instant claims 14-23).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, though Graefe is directed to an apparatus, specific disclosure in Graefe in column 4, lines 41-44 and in column 1, lines 49-59 cannot be totally ignored. Kennedy is a secondary reference, relied upon for its teaching of white pigment with polyurethane. Hirai is brought in for its suggestion to use brown pigment.

Applicants' conclusion (page 11) that the combination of references would neither teach nor suggest claimed invention is not convincing.

The submitted declaration by inventor Barber has been considered. It deals with short historical background of instant invention and some problems associated with retail mold forms. The declaration is devoid of any reasons to obviate cited rejection based on prior art. It is the examiner's position that what is presented in the said declaration is not new. Attempts have already been made by others to solve difficulties faced by instant inventors. These attempts have been successful. Hence even though the declaration provided some important and useful information, it is not conducive to establish nonobviousness or anticipation of instant invention.

Applicants certainly do not concur with the foregoing reasoning. Attempts made by others to solve the difficulties faced by the instant inventors have **not** been successful. The Office Action provides no basis for saying that they have.

The Graefe process is designed to avoid formation of hollows or voids (see, e.g., col. 4, lines 41-44), whereas the rotational molding process used in the present invention (see claim 2 and claims dependent thereon, and claim 29) results in a hollow molded article. (See Exhibit A, a printout from <http://composite.about.com/library/glossary/r/bldef-r4634.htm> defining "rotational molding." Thus the Graefe patent teaches against the present invention.

In any event, it is submitted that the amendment to claim 1, upon which all the remaining claims except claim 29 are dependent, clearly renders these claims non-obvious over the teachings of Graefe combined with Kennedy et al. and Hirai et al. Please compare Figure 1 of Graefe with Figures 10 and 11 of the present application. These figures show gel profiles of the elastomers used in the respective processes.

Figure 1 of Graefe is described as representing the build-up in viscosity as a function of time. Note that the graph indicates the gelling period is from about 15 to about 95 seconds. Thus the first half of the gelling period is from 15 to 55 seconds. During that first half of the gelling period, the viscosity of the Graefe composition rises from 1,000 cp to about 10,000 cp. In other words, it rises steeply over the first half of the gelling period.

In contrast, Figure 10 of the present application shows that for the composition having a 201-second gelling period (half of which would be about 100 seconds), the graph is substantially flat for half the gelling period. For the composition having a 160-second gelling period (half of which would be 80 seconds, the graph is substantially flat for half the gelling period. For the composition having a 141-second gelling period (half of which would be about 70 seconds), the graph is substantially flat for half the gelling period. Similar results are shown in Figure 11.

None of the cited references teach or suggest the desirability of a gelling profile as claimed herein, which is substantially flat over the first half thereof.

With respect to claim 29, this claim specifies the use of a rotational molding process, which as shown in Exhibit A, produces a hollow article. The Graefe reference describes a process applicable to the production of molded articles **without voids**; whereas the process of present claim 29 produces molded forms which are **hollow**. The reference teaches away from the molded display forms of claim 29 which are hollow, and thus cannot be used to render these forms obvious.

It is noted that no specific rejections of claims 46 and 47 were made in the previous Office Action; however, if such a rejection was intended, it has been overcome by the amendment to claim 1 upon which these claims depend.

Conclusion

It is believed that with this Amendment the application is now in condition for allowance and passage to issuance is respectfully requested.

A Notice of Appeal and a check in the amount of \$165 for the required fee accompany this submission.

It is believed that no additional fees are due with the submission of this Amendment. If this is incorrect, however, please charge any required fee or the fee for any extension of time required to Deposit Account No. 07-1969.

Respectfully submitted,



Ellen P. Winner
Reg. No. 28,547
Customer No. 23713

GREENLEE, WINNER and SULLIVAN, P.C.
5370 Manhattan Circle, Suite 201
Boulder, CO 80303
Phone (303) 499-8080
Fax (303) 499-8089
ks: 8/6/04
Docket 4-01